

REMARKS/ARGUMENTS

Request for Continued Examination:

The applicant respectfully requests continued examination of the above-indicated
5 application as per 37 CFR 1.114.

1. Objection to the specification:

The disclosure is objected to because of the following informalities: “mirror
ration” should be changed to “mirror ratio” in paragraph 21.

10 Response:

Paragraph 21 has been amended to change three instances of the word
“ration” to become “ratio”. Acceptance of the corrected specification is
respectfully requested.

15 2. Rejection of claims 1, 3-5, 7-11, and 13-18 under 35 U.S.C. 112, second paragraph:

Claims 1, 3-5, 7-11, and 13-18 are rejected under 35 U.S.C. 112, second
paragraph as being indefinite for failing to particularly point out and distinctly
claim the subject matter which applicant regards as the invention.

20 Response:

Claims 1 and 11 have been amended to remove the term “different
magnitude”, thereby removing the potential indefinite claim language caused by
this term.

25 Claim 1 recites the limitations of “the output current being delivered to the
monitor for generating the display driving voltage” and “adjusting the output
current to drive the display driving voltage to approach the reference display
driving voltage”. The display driving voltage is generated based on the output
current, and therefore the output current is adjusted in order to drive the display
30 driving voltage to approach the reference display driving voltage when the

display driving voltage is not equal to the reference display driving voltage. The applicants respectfully submit that this claim language is definite and does not lack proper antecedent basis.

5 Claims 1, 3, 4, 11, and 13-15 have been amended to replace the term “predetermined display driving voltage” with the term “reference display driving voltage”. This amendment is supported in paragraph 25 of the specification, and no new matter is added.

10 In view of the above, reconsideration of claims 1, 3-5, 7-11, and 13-18 is respectfully requested.

3. Rejection of claims 11, 13-16, and 18 under 35 U.S.C. 101:

15 Claims 11, 13-16, and 18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Response:

Independent claim 11 has been amended to recite the step of “driving a monitor to display images according to the display driving voltage”. This amendment is fully supported in paragraph 16 of the specification, and no new matter is added. Claim 11 now recites a useful, tangible, and concrete result by displaying images through the monitor.

25 As a result, reconsideration of claims 11, 13-16, and 18 is respectfully requested.

4. Rejection of claims 1, 3-5, 7-11, and 13-18 under 35 U.S.C. 102(b):

Claims 1, 3-5, 7-11, and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Devine (US 5,978,745).

Response:

Independent claims 1 and 11 have been amended to overcome these rejections. Claims 1 and 11 now contain limitations previously found in claims 17 and 18. That is, claims 1 and 11 now recite that the “plurality of mirror currents have magnitudes differing from each other by a factor of two, and the plurality of mirror currents add together to form the output current”.
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In contrast, Devine does not teach that mirror currents 320, 322, 324 have a different magnitude or that the magnitudes differ from each other by a factor of
10 two. Devine teaches in column 5, lines 23-28, “Further, each time the present beam current crosses from one side of the target beam current to the other, a multiplier (which preferably had an initial value of 100%) is preferably reduced by 25%. This multiplier is used before the gain is either added to or subtracted from.” However, this does not imply that the plurality of mirror currents have
15 magnitudes differing from each other by a factor of two. Although “2” is a factor of “100”, multiplying an initial value by a multiplier of 100% does not in any way imply that the initial value differs from the resulting value by a factor of 2.

In addition, the applicant would like to point out the following differences
20 between the claimed invention and Devine.

(1) In claim 1, the converter of the display controller comprises both a current mirror circuit and a voltage calibration circuit. As shown in Figure 3 of the instant application, digital-to-analog converter (DAC) 66 comprises the
25 current mirror circuit made up of transistors 82, 83a, 83b, 83c.

In contrast, Devine does not teach the same structural relationship in which the converter comprises a current mirror circuit. The Examiner has stated that the claimed converter is analogous to Devine’s display controller 310 and that the
30 claimed current mirror circuit is analogous to Devine’s current samplers 320, 322,

324 (see Figure 3 of Devine). However, Devine's structural relationship is not the same as what is recited in claim 1 since Devine does not teach a converter (display controller 310) comprising a current mirror circuit (current samplers 320, 322, 324). As a result, Devine does not teach the structure recited in claim 1.

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(2) In claim 1, the current mirror circuit generates an output current according to a reference current and the display data. The Examiner has said that the claimed current mirror circuit is analogous to Devine's current samplers 320, 322, 324. However, Devine's current samplers 320, 322, 324 have a current sampling function, and current samplers do not generate an output current, as is claimed.

(3) In claims 1 and 11, the output current and the reference current correspond to a mirror ratio, but the reference current is not the same as the output current. The Examiner has said that the claimed current mirror circuit is analogous to Devine's current samplers 320, 322, 324. However, as Devine states in column 6, lines 13-15, the current samplers 320, 322, 324 receive beam currents directly from the amplifiers 314, 316, 318. Therefore, Devine does not teach a reference current that is distinct from the output current, and that the output current and the reference current correspond to a mirror ratio as is claimed.

(4) In claim 1, the voltage calibration circuit is used for modifying the mirror ratio according to the display driving voltage and a reference display driving voltage and adjusting the output current to drive the display driving voltage to approach the reference display driving voltage.

The Examiner has said that the claimed voltage calibration circuit is analogous to Devine's internal processor 308 shown in Figure 3. But Devine states in column 6, lines 30-35 that the internal processor 308 "sends a request to

the host computer 102 for initiating a new red, green, and blue beam measurement and calibration routine”, which is not the same as what is claimed.

5 (5) In claims 1 and 11, the first current route and “a plurality of second current routes electrically connected to the first current route” have a defined structural relationship. However, the elements 312, 320, 322, 324 shown in Figure 3 of Devine that the Examiner has said are analogous to the claimed first current route and second current routes have no such structural relationship.

10 (6) In claim 1, the present invention generates the output current according to a reference current, and also adjusts the display driving voltage based on the output current. However, Devine teaches adjusting the amplifier gain of amplifiers 314, 316, 318 to adjust the voltage. In addition, the function of the video amplifier is to convert voltage to current. This differs from the claimed invention, which adjusts the mirror ratio by using the reference current to adjust the output current. Furthermore, Devine requires numerous voltage, current, and digital conversions, whereas the claimed invention can directly use the current mirror to achieve this.

15 20 For the above reasons, the applicant respectfully submits that Devine does not anticipate the currently amended claims 1 and 11, and claims 1 and 11 are patentable over the cited prior art. Furthermore, claims 3-5, 7-10, and 13-16 are dependent on claims 1 and 11, and should be allowed if their respective base claims are allowed. Reconsideration of claims 1, 3-5, 7-11, and 13-16 is therefore respectfully requested.

25 5. Introduction to new claims 19 and 20:

30 New claim 19 states that the “converter further comprises a switch module coupled to the plurality of second current routes for controlling the plurality of second current routes respectively to form the output current.” Similarly, new

claim 20 recites that “step (a) further comprises switching the plurality of second currents routes on respectively to form the output current.”

Support for these new claims is found in paragraphs 18-20 and in Figure 3,
5 where the current from the current mirror will pass to switches SW0-SWn-1 to determine which current routes will be used to contribute to the output current.

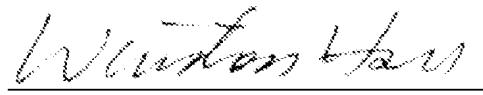
On the other hand, Devine does not teach a switch module used for controlling the plurality of second current routes for forming the output current,
10 and claims 19 and 20 are patentable over the cited prior art. Consideration of claims 19 and 20 is respectfully requested.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Sincerely yours,

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)